

09/623281

WO 99/45644

PCT/GB99/00550

1/38

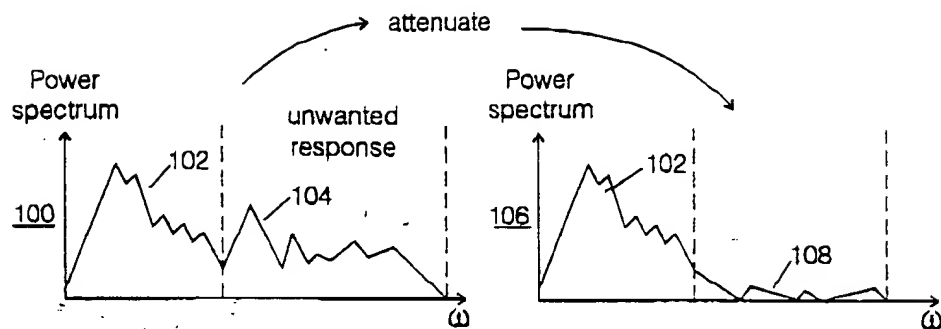


Fig. 1

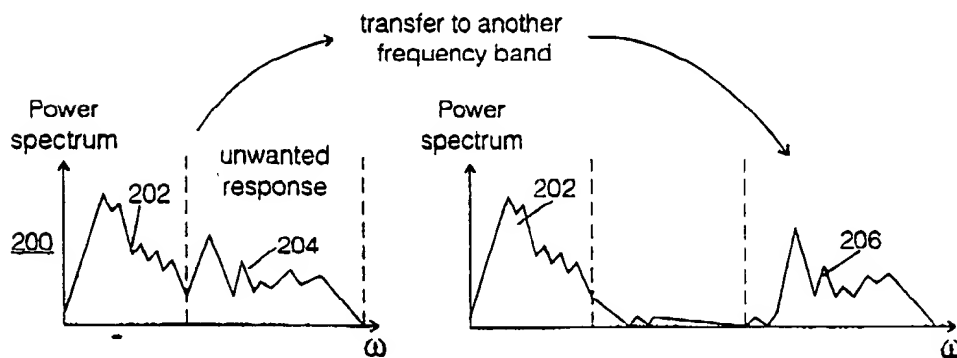


Fig. 2

09/623281

WO 99/45644

PCT/GB99/00550

2/38

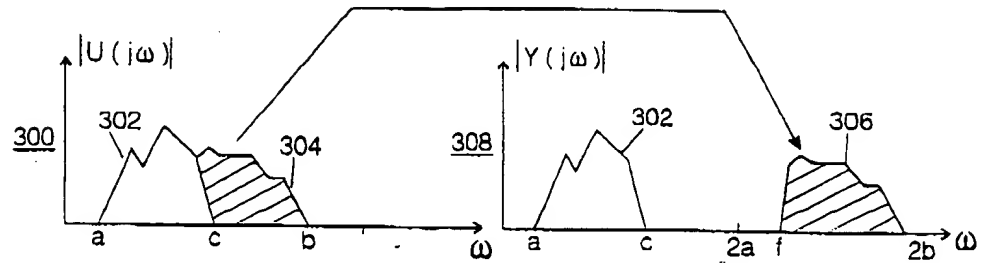


Fig. 3

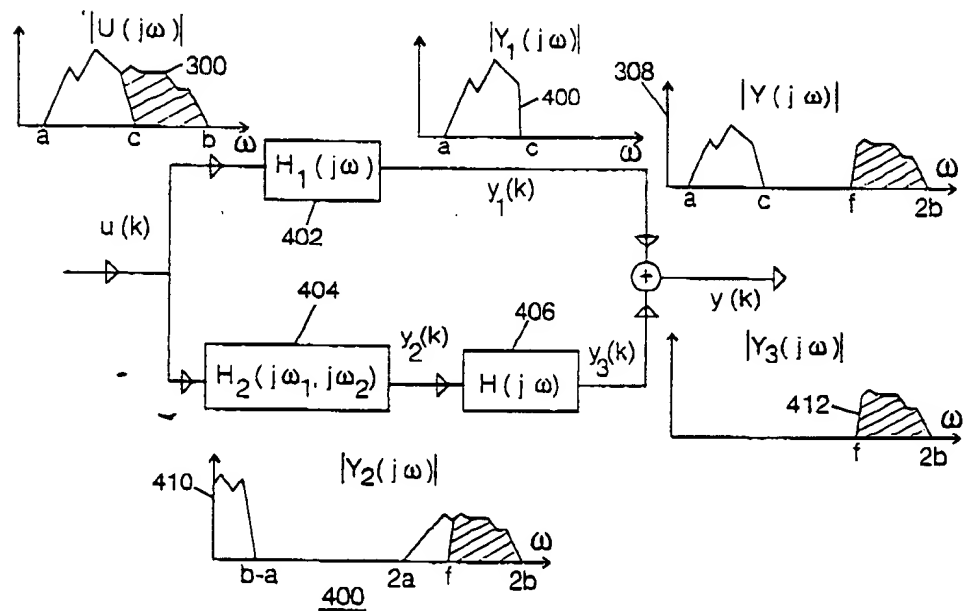


Fig. 4

09/623281

WO 99/45644

PCT/GB99/00550

3/38

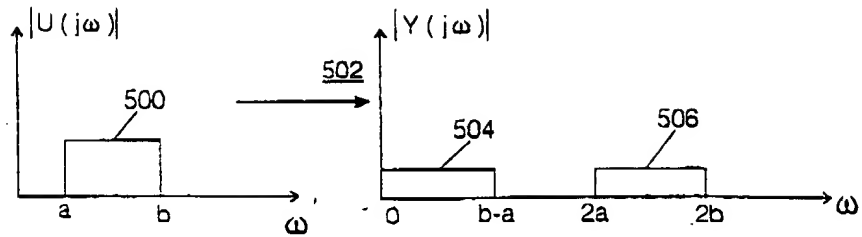


Fig. 5

09/62328T

PCT/GB99/00550

WO 99/45644

4/38

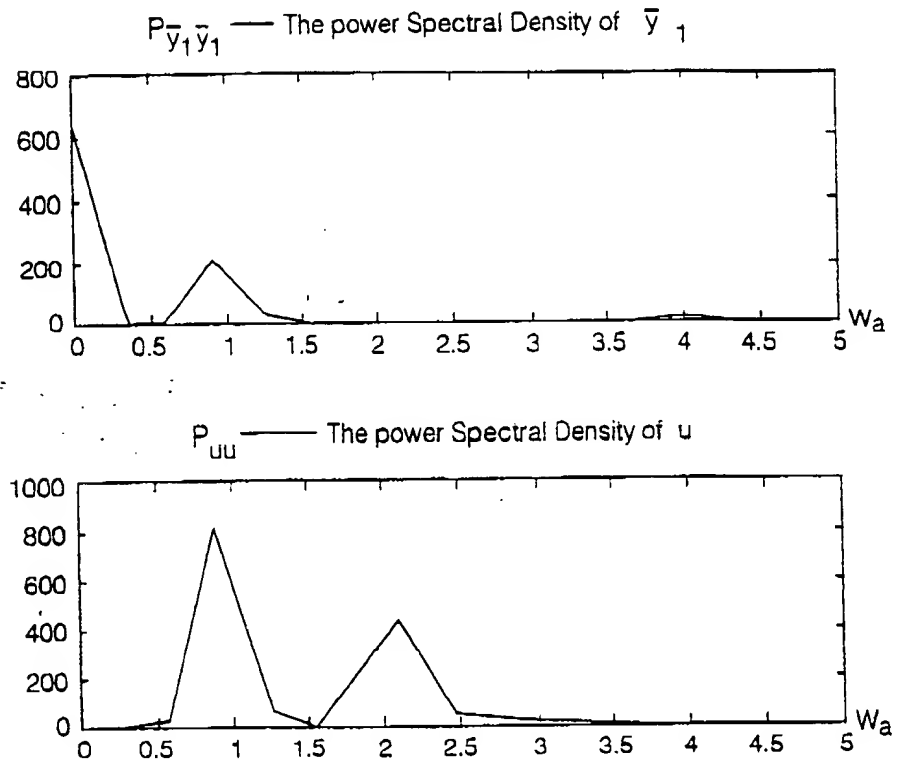


Fig. 6

09/623281

WO 99/45644

PCT/GB99/00550

5/38

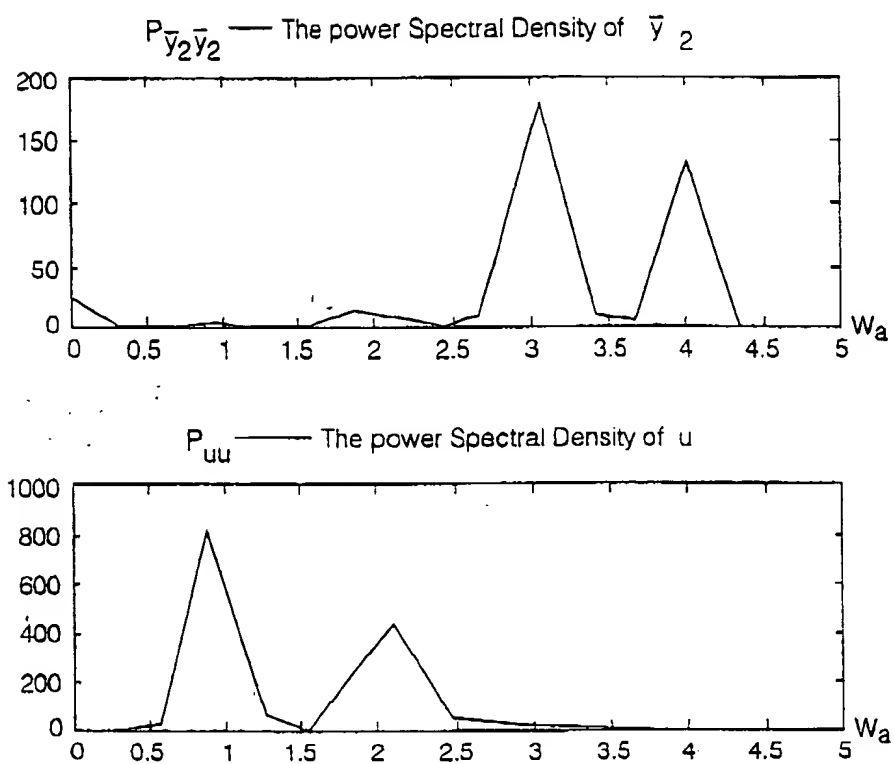


Fig. 7

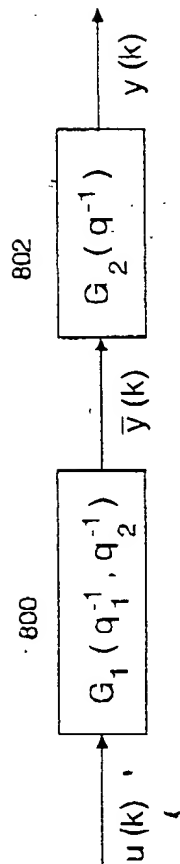


Fig. 8

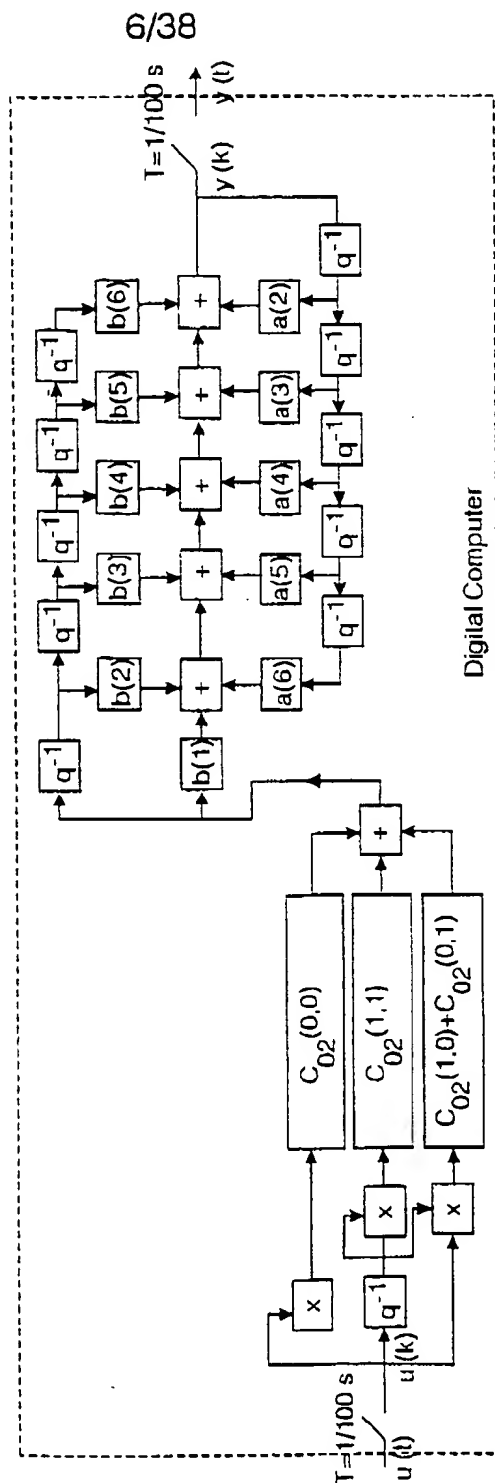


Fig. 9

7/38

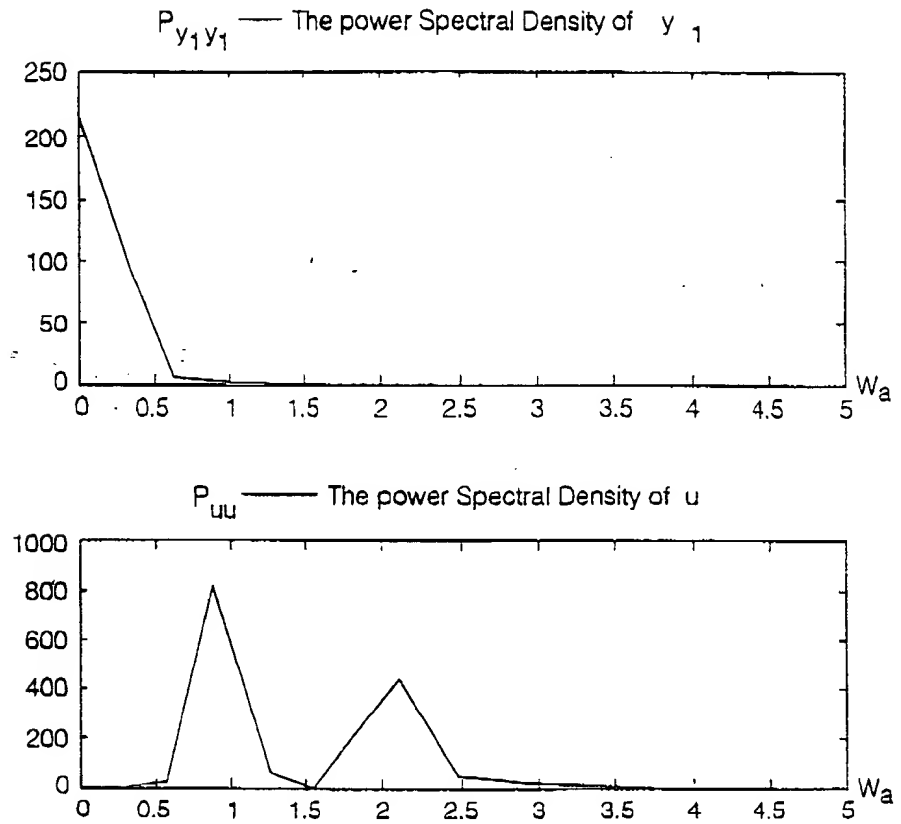


Fig. 10

09/62328T

WO 99/45644

PCT/GB99/00550

8/38

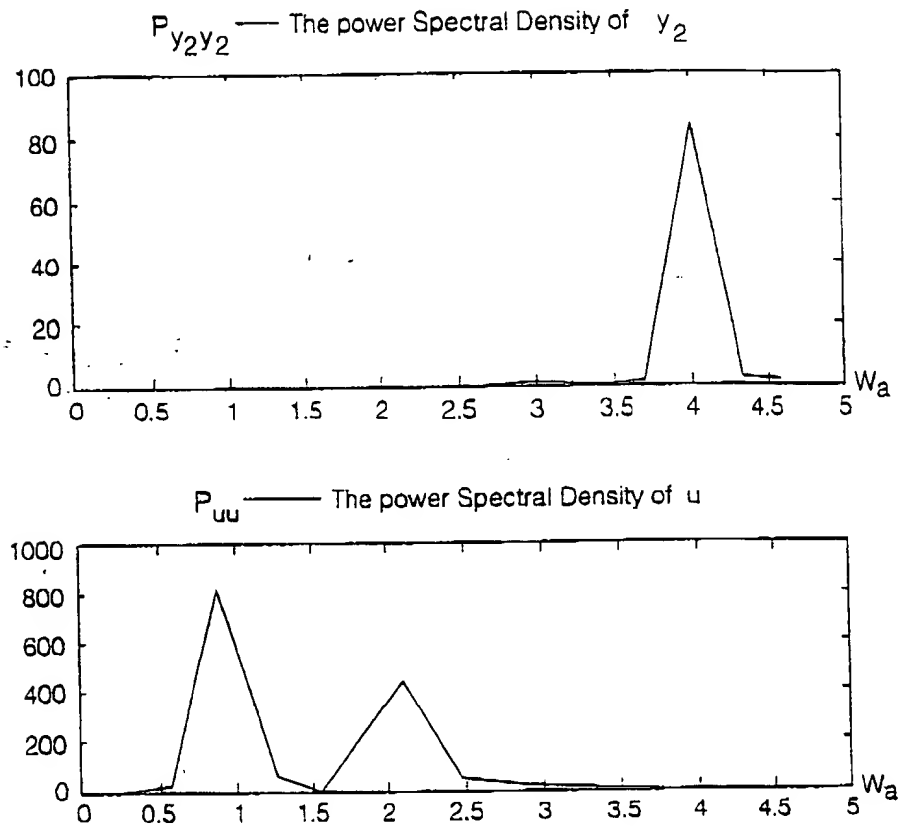


Fig. 11



09/623281

WO 99/45644

PCT/GB99/00550

9/38

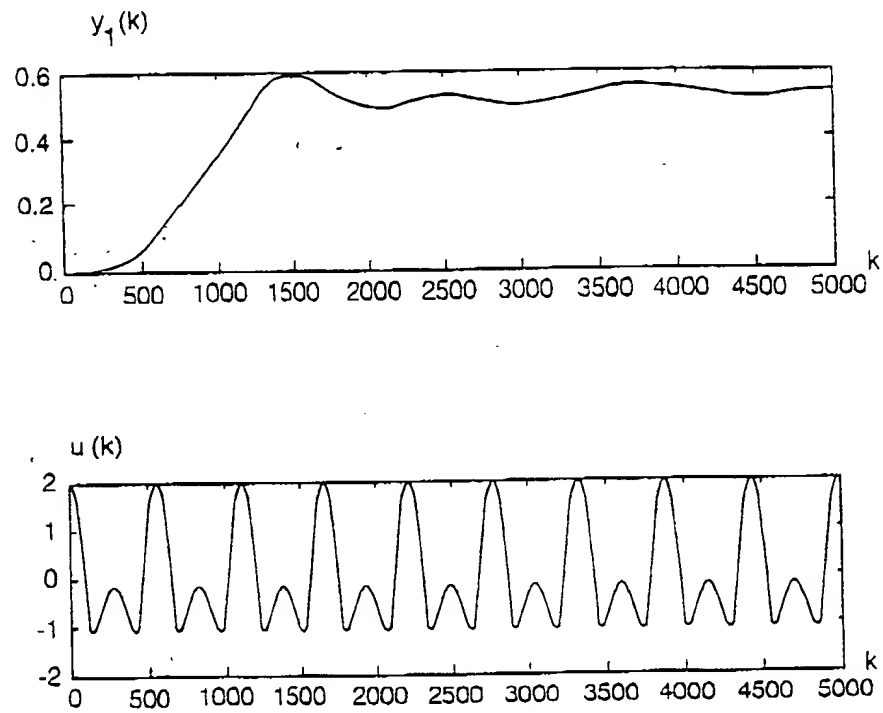


Fig. 12

09/623281

WO 99/45644

PCT/GB99/00550

10/38

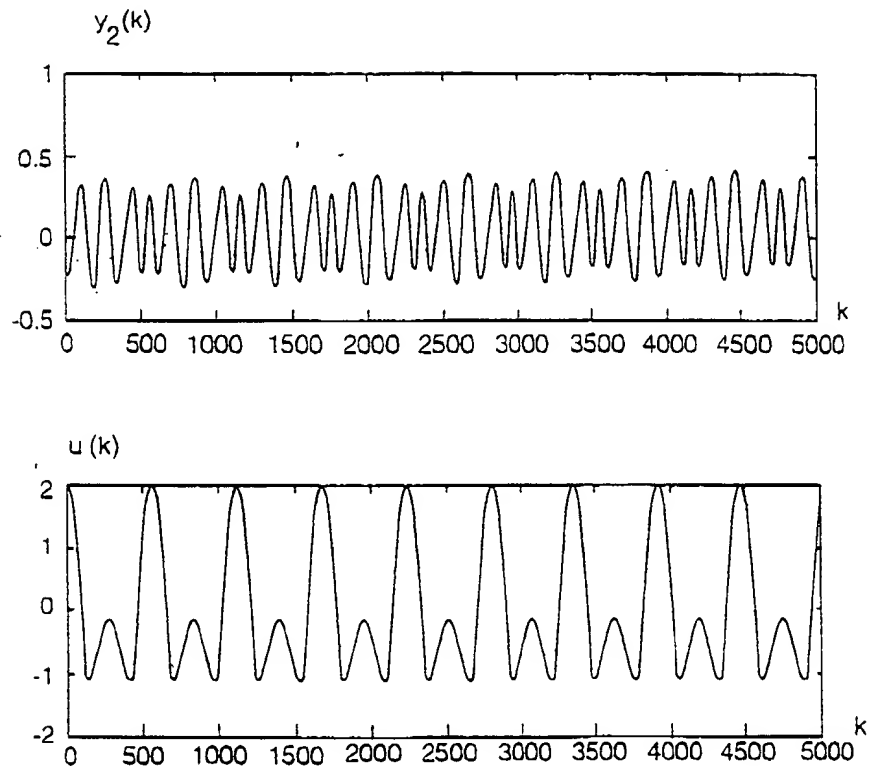


Fig. 13

09/623281

PCT/GB99/00550

WO 99/45644

11/38

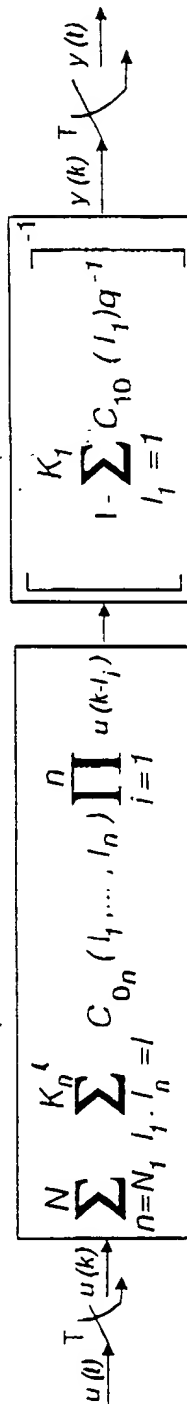


Fig. 14

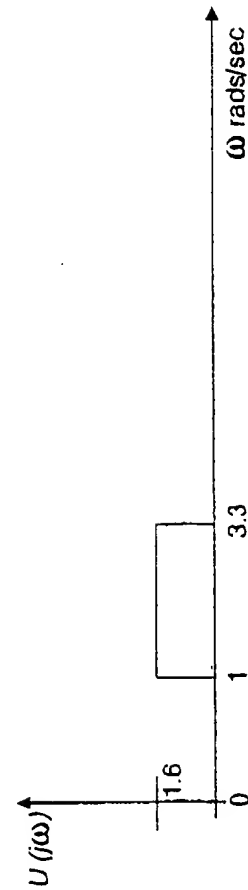


Fig. 15

09/623281

WO 99/45644

PCT/GB99/00550

12/38

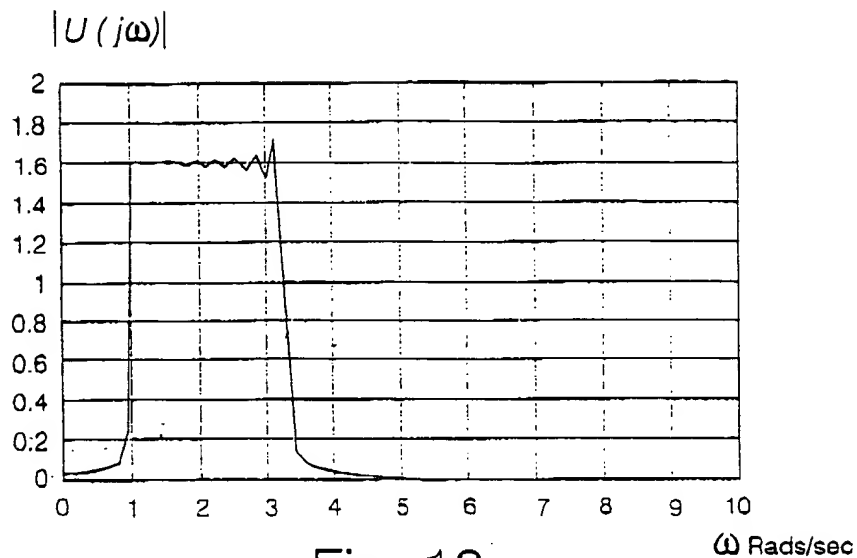


Fig. 16

$\underbrace{|U| \dots |U(j\omega)|}_R \text{ for } n = 2 \text{ and } 3$

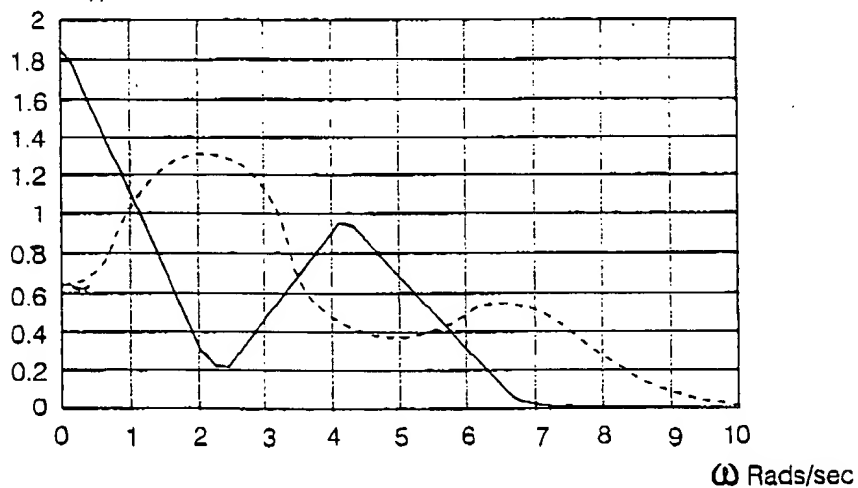


Fig. 17

09/623281

WO 99/45644

PCT/GB99/00550

13/38

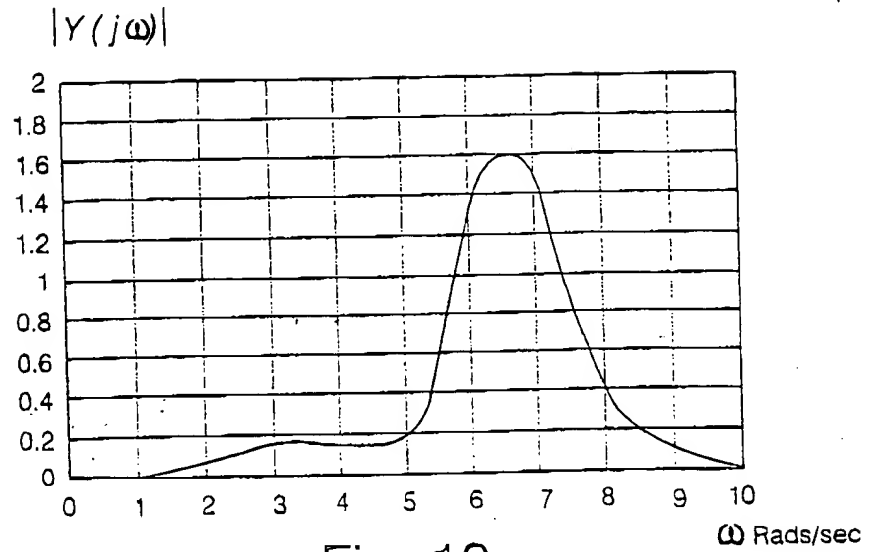


Fig. 18

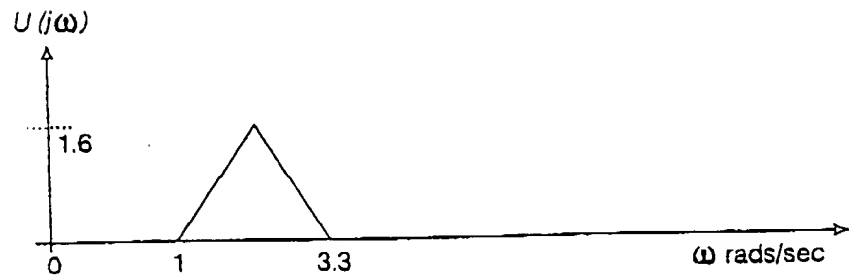


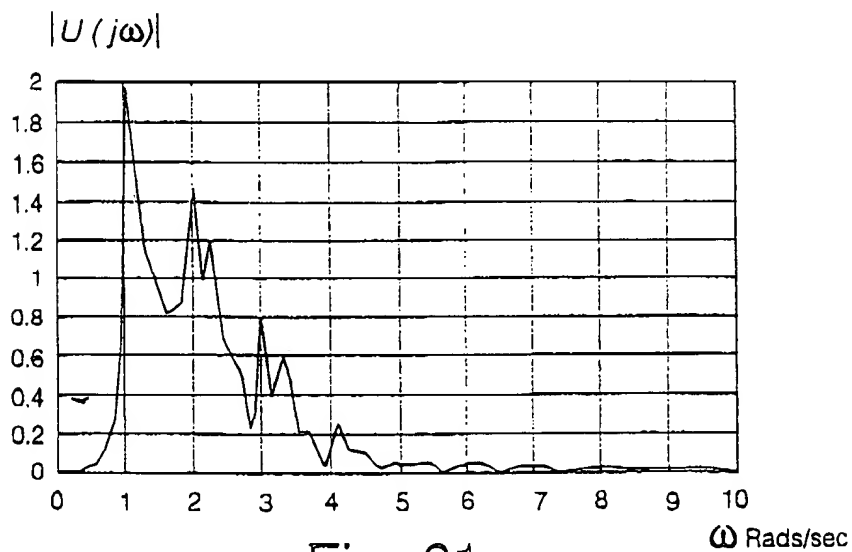
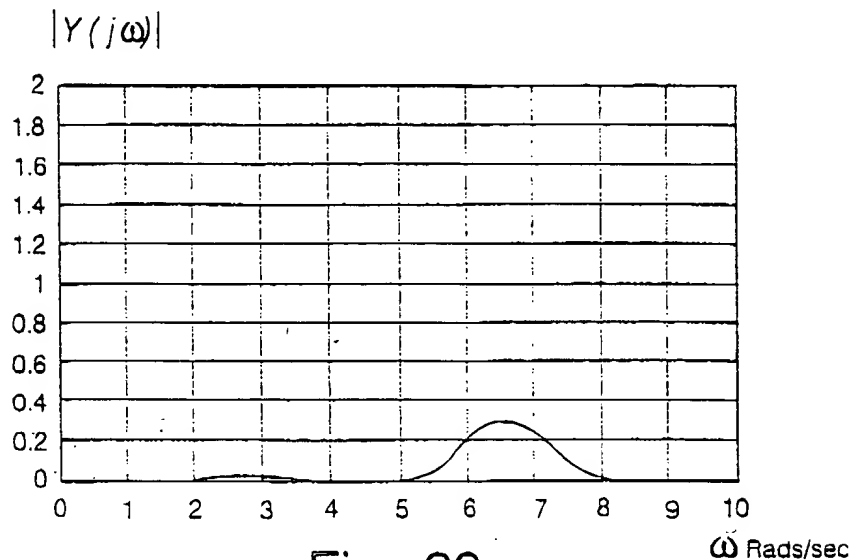
Fig. 19

09/623281

WO 99/45644

PCT/GB99/00550

14/38



09/62328T

WO 99/45644

PCT/GB99/00550

15/38

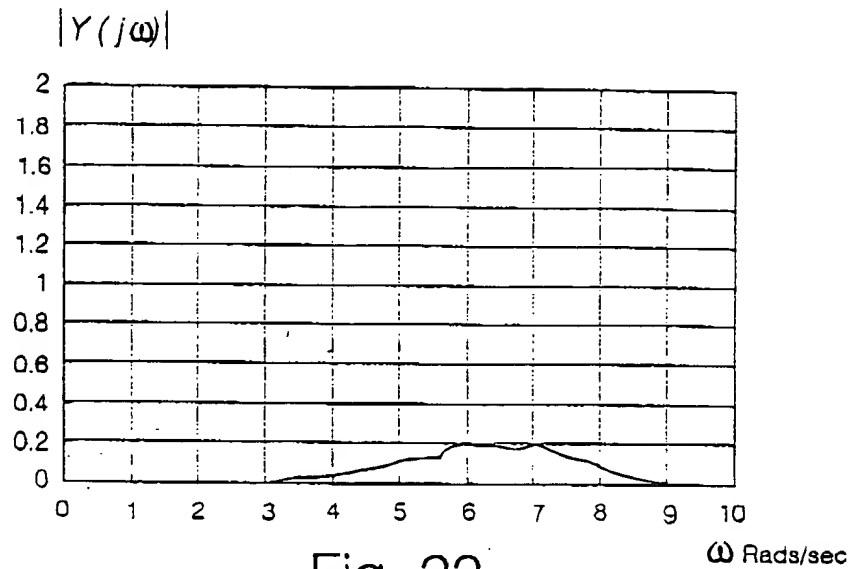


Fig. 22

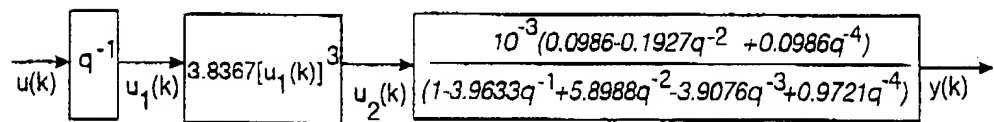


Fig. 23

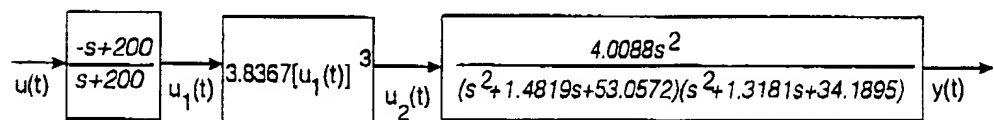


Fig. 24

09/623281

WO 99/45644

PCT/GB99/00550

16/38

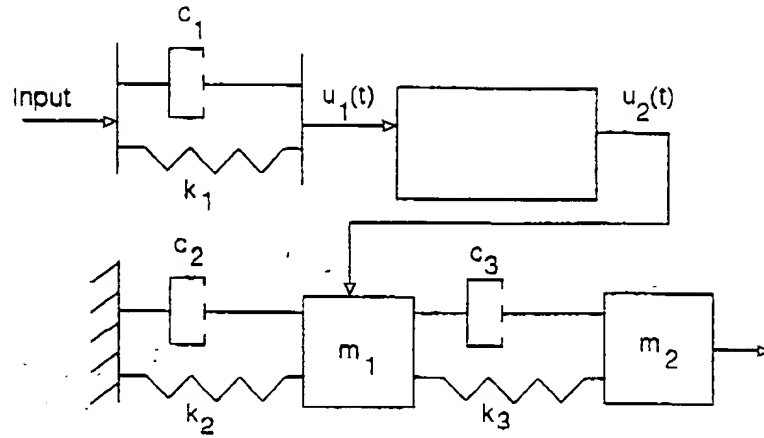


Fig. 25

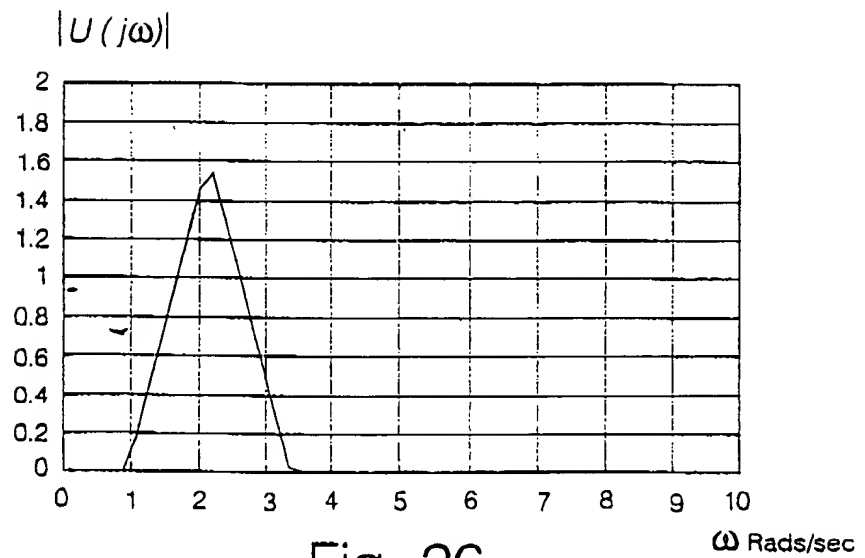


Fig. 26

SUBSTITUTE SHEET (RULE 26)



09/62328T

WO 99/45644

PCT/GB99/00550

17/38

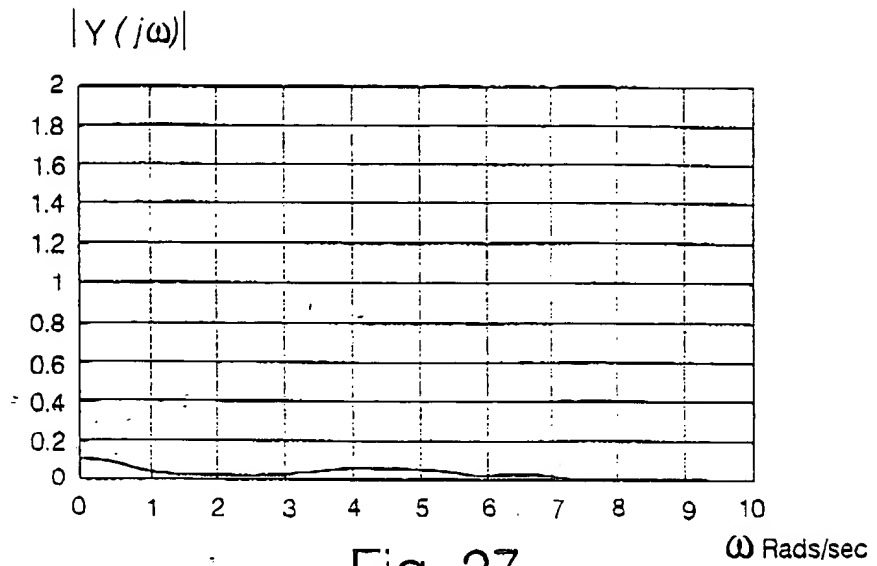


Fig. 27

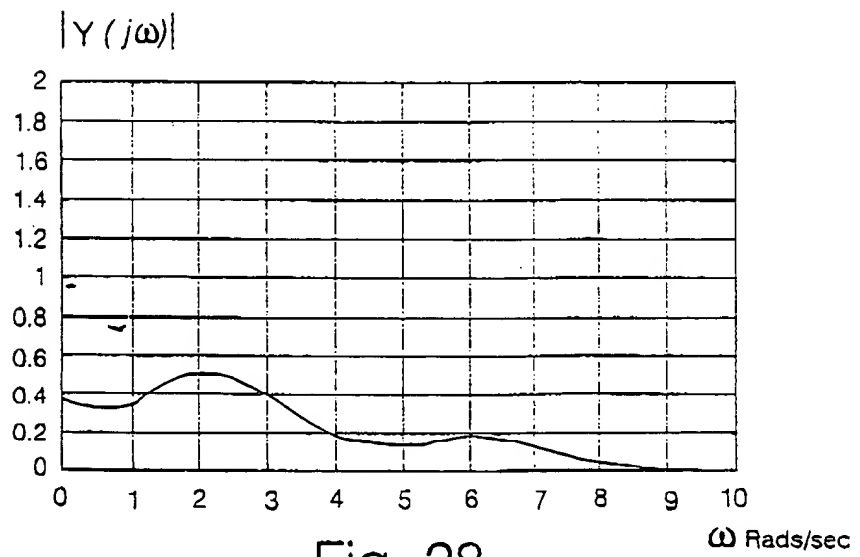


Fig. 28

09/623281

WO 99/45644

PCT/GB99/00550

18/38

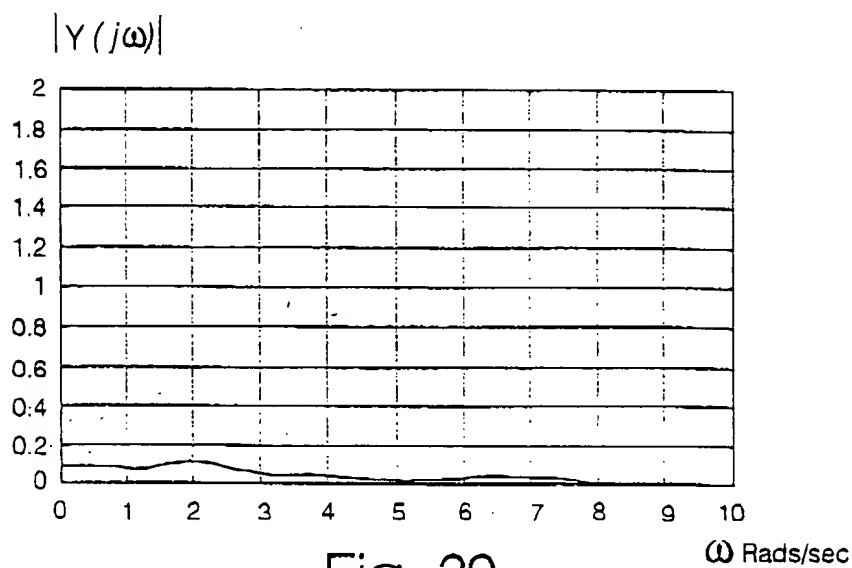


Fig. 29

19/38

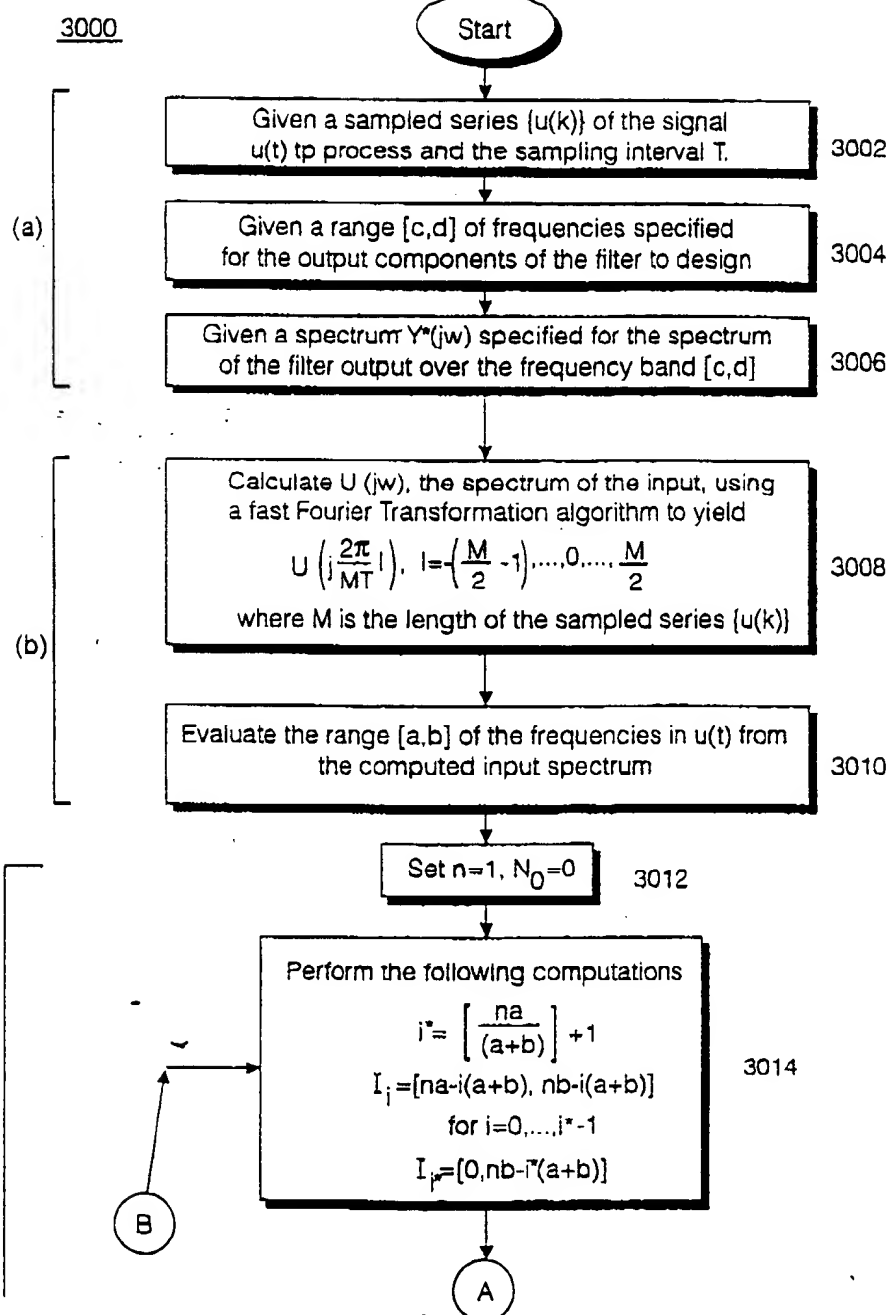
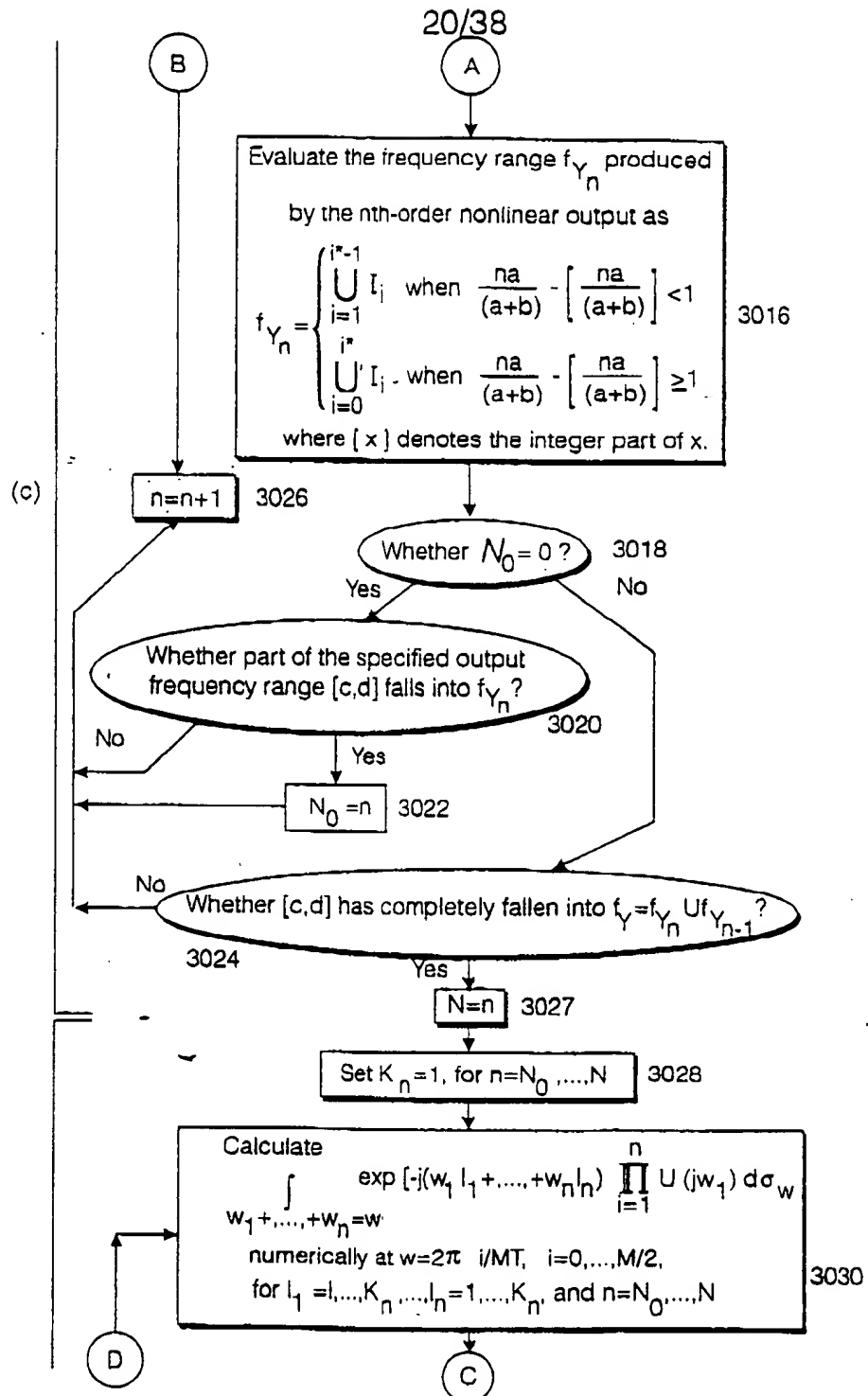


Fig. 30

09/623281

WO 99/45644

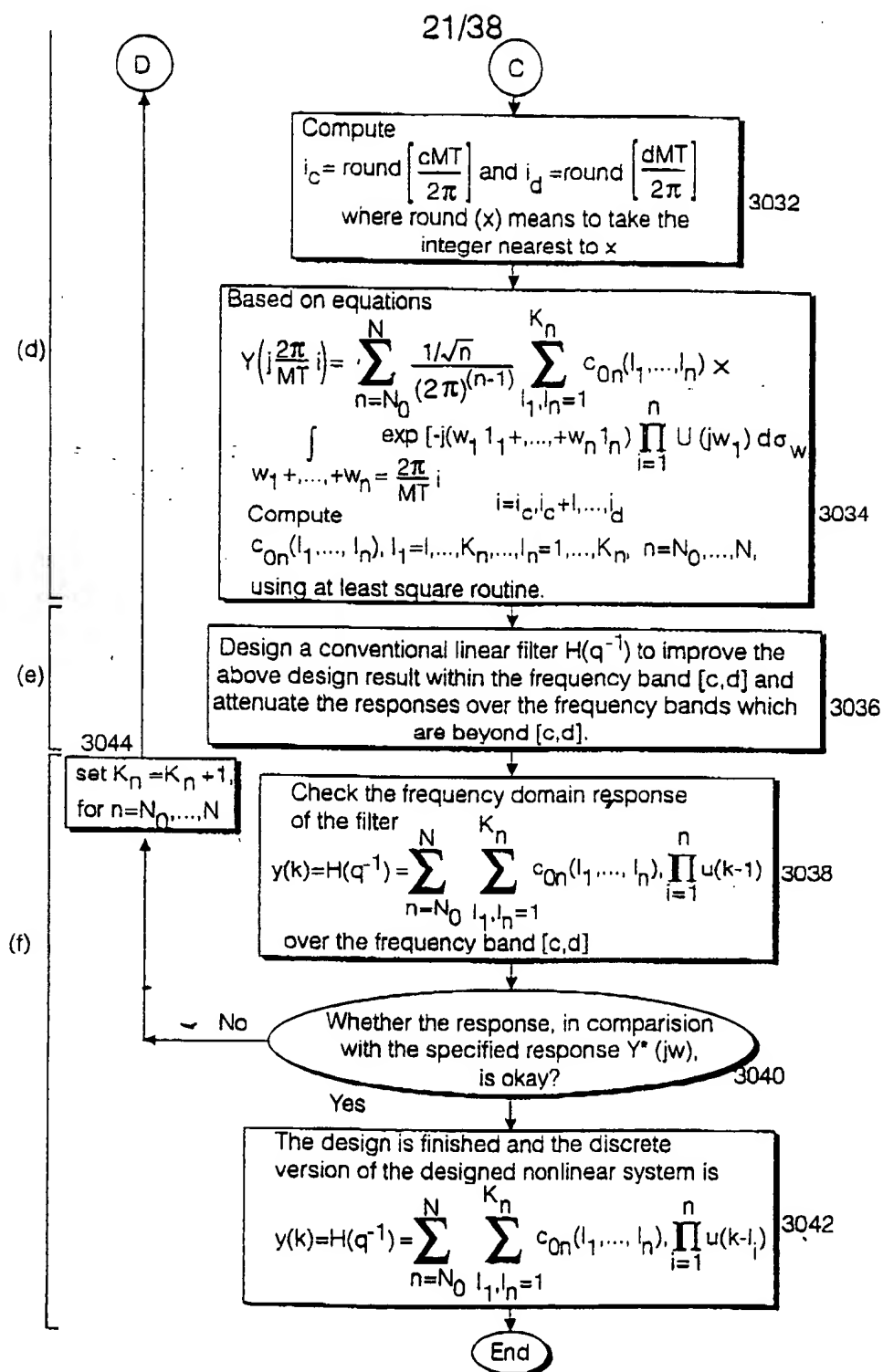
PCT/GB99/00550



09/62328T

WO 99/45644

PCT/GB99/00550



SUBSTITUTE SHEET (RULE 26)

09/623281

WO 99/45644

PCT/GB99/00550

22/38

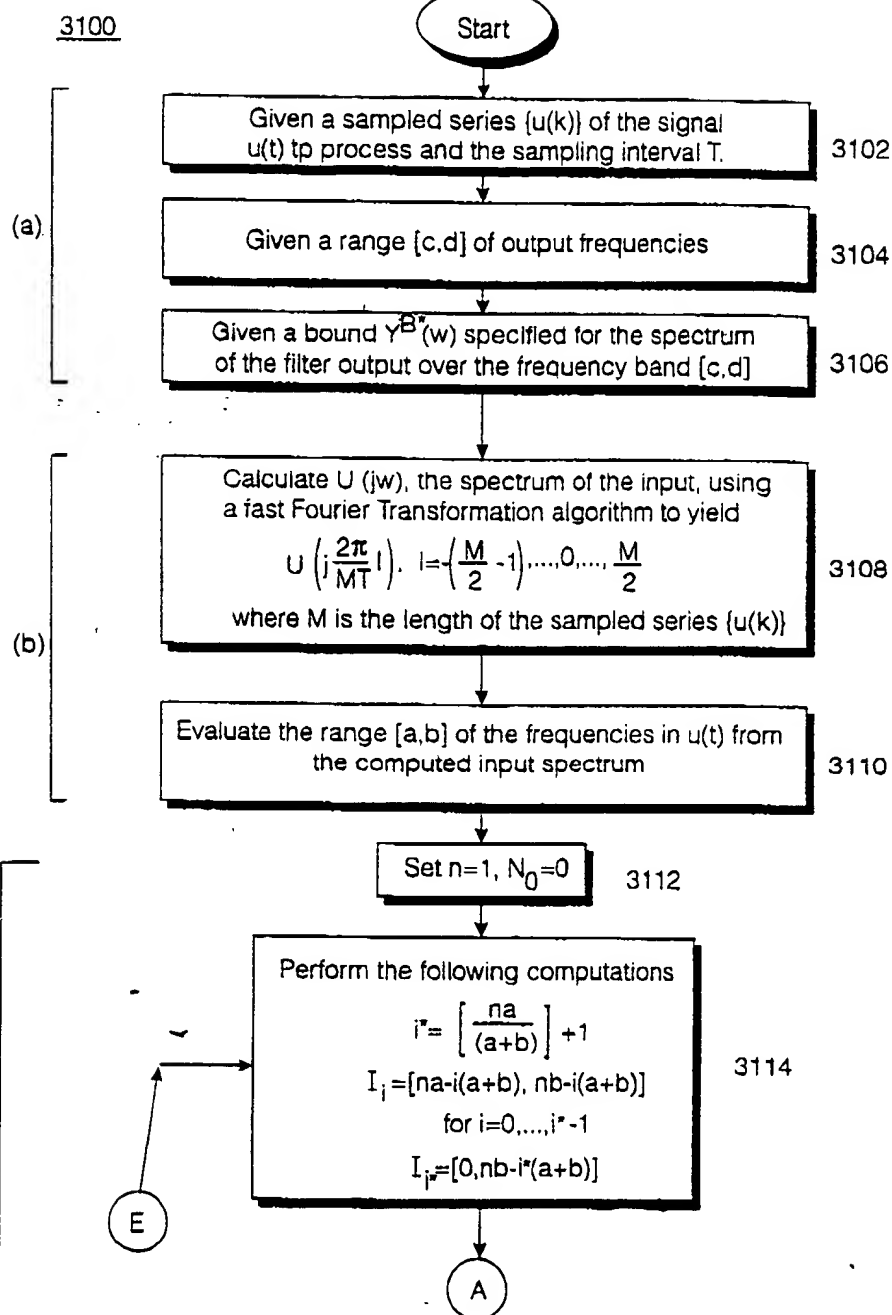
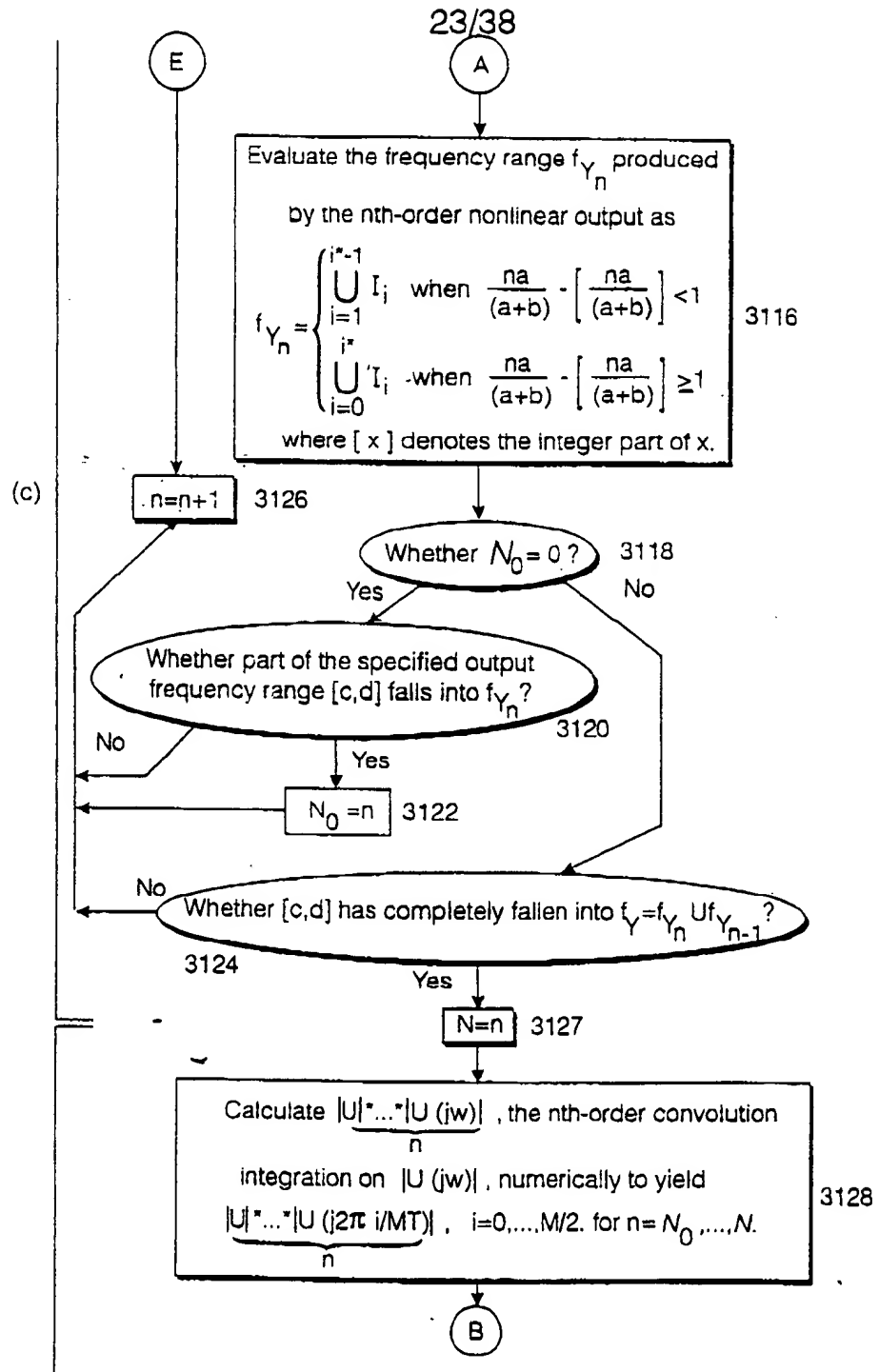


Fig. 31

09/62328T

WO 99/45644

PCT/GB99/00550



SUBSTITUTE SHEET (RULE 26)

09/623281

WO 99/45644

PCT/GB99/00550

24/38

B

Compute  
 $i_c = \text{round} \left[ \frac{cMT}{2\pi} \right]$  and  $i_d = \text{round} \left[ \frac{dMT}{2\pi} \right]$   
 where round (x) means to take the integer nearest to x

3132

(d)

Based on equations  

$$Y^B \left( i \frac{2\pi}{MT} \right) = \sum_{n=N_0}^N \frac{1}{(2\pi)^{(a-1)}} c_n \underbrace{|U| \dots U \left[ i \left( \frac{2\pi}{MT} \right) \right]}_n$$
  
 $i = i_c, i_c + 1, \dots, i_d$   
 Compute  
 $C_n, n = N_0, \dots, N,$   
 using at least squares routine under the constraint that the results must be positive

3134

(e)

Select NARX model parameters  
 $K_n, c_{0n}(l_1, \dots, l_n), l_1 = 1, \dots, K_n, \dots, l_n = 1, \dots, K_n,$   
 for  $n = N_0, \dots, N,$  under the constraints  

$$C_n = \sum_{l_1=1}^{K_n} \dots \sum_{l_n=1}^{K_n} |c_{0n}(l_1, \dots, l_n)| \quad n = N_0, \dots, N$$
  
 and other constraints specified by specific design problems

3136

Check the frequency domain response of the filter  

$$y(k) = H(q^{-1}) = \sum_{n=N_0}^N \sum_{l_1, l_n=1}^{K_n} c_{0n}(l_1, \dots, l_n) \prod_{i=1}^n u(k-l_i)$$
  
 over the frequency bands beyond [c,d], which should, ideally, be negligible

3138

Whether the frequency response beyond the band [c,d] is ok?

3140

C

D

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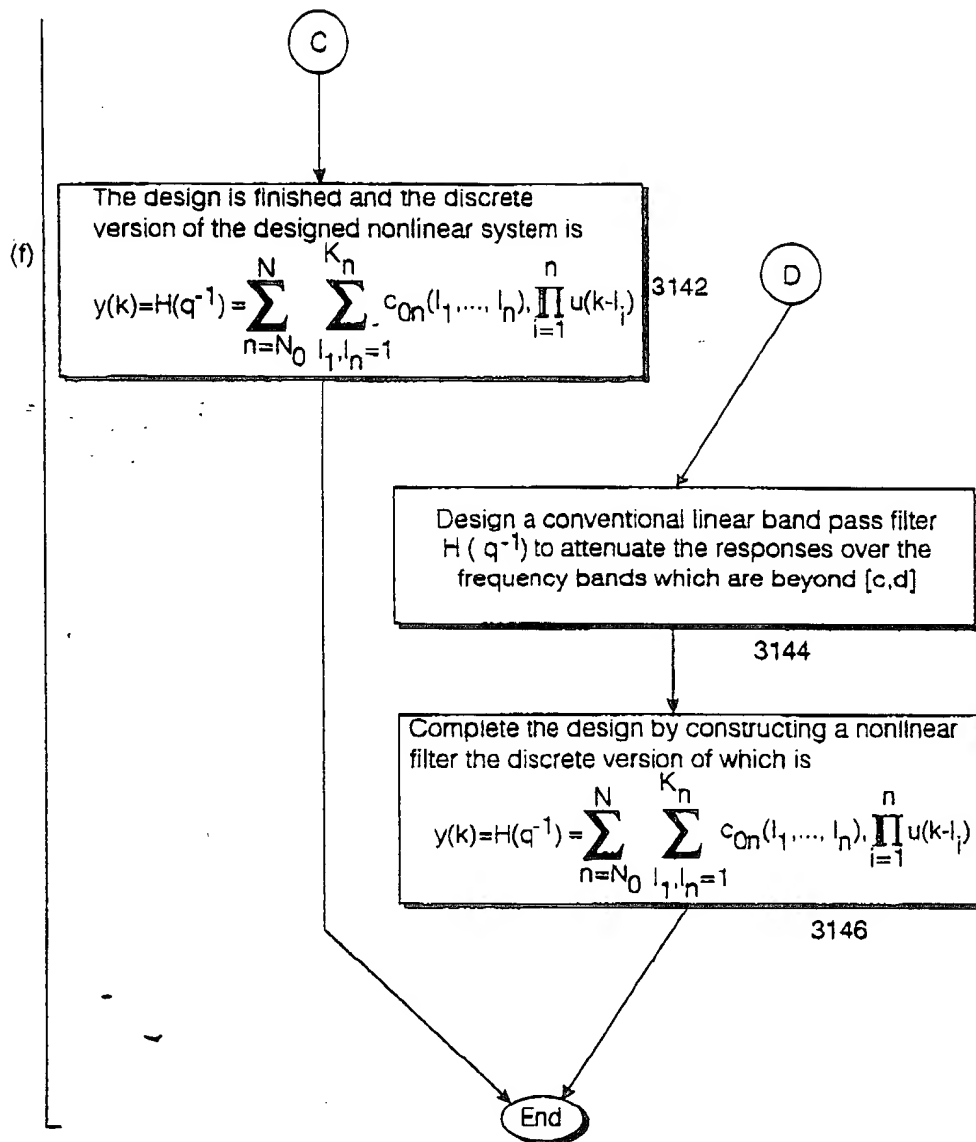


09/62328T

WO 99/45644

PCT/GB99/00550

25/38



09/623281

WO 99/45644

PCT/GB99/00550

26/38

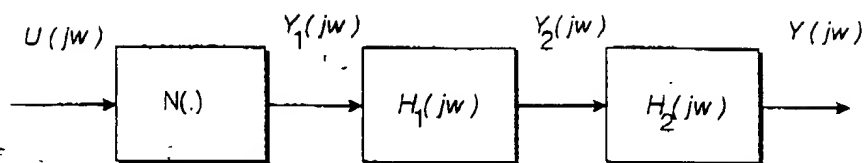


Fig. 32

09/623281

WO 99/45644

PCT/GB99/00550

27/38

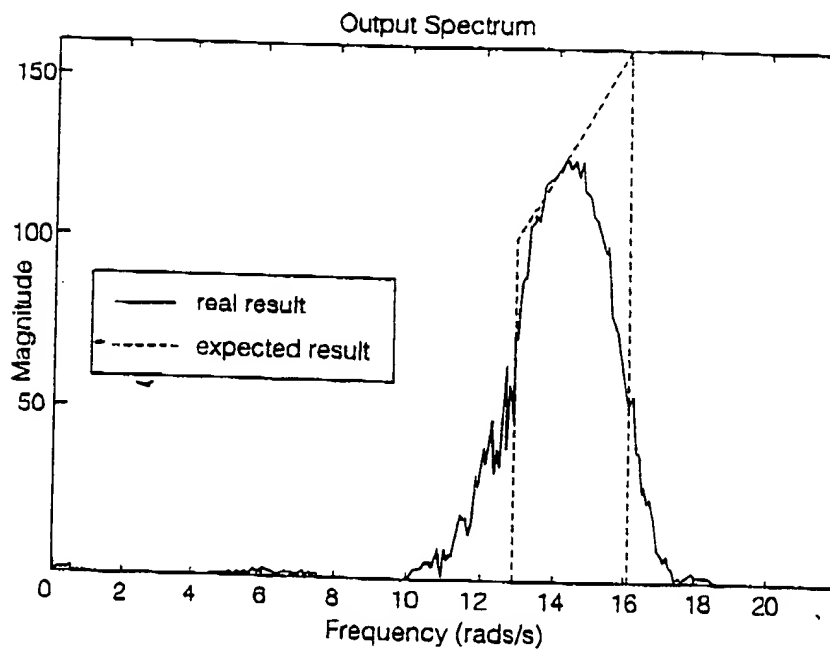
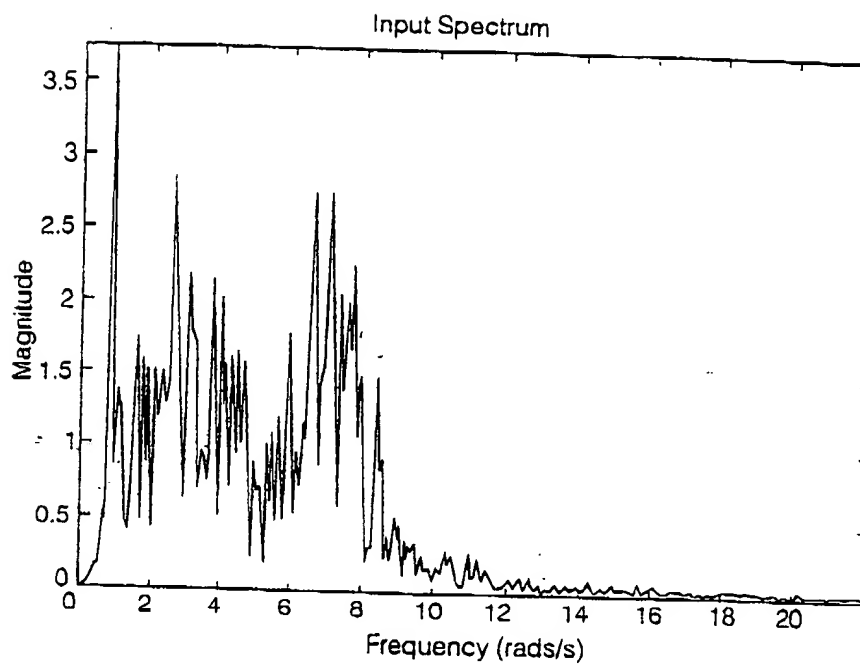


Fig. 33

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No. 104916 DATED 30/08/00

09/623281

WO 99/45644

PCT/GB99/00550

28/38

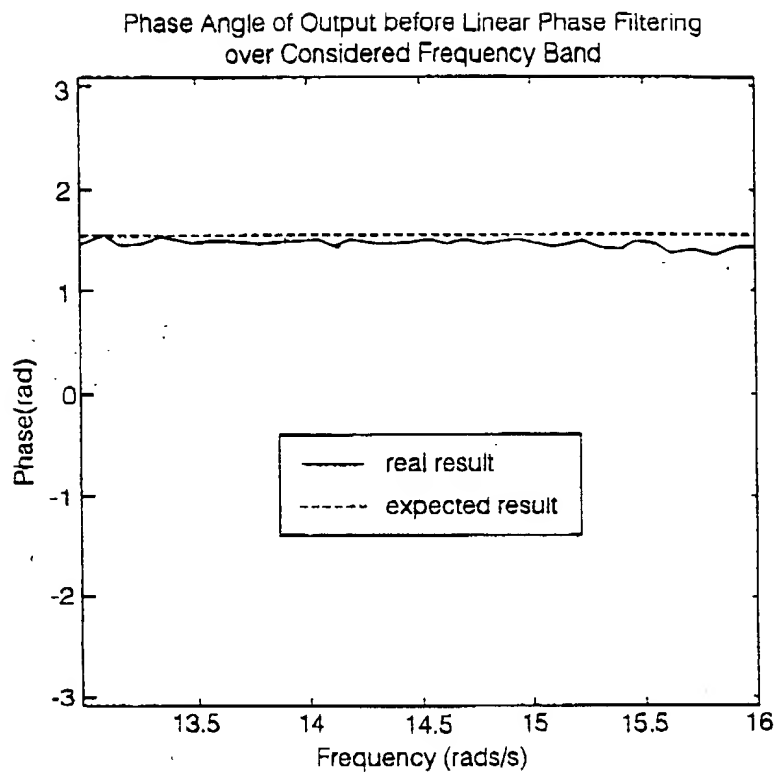


Fig. 34

09/623281

WO 99/45644

PCT/GB99/00550

29/38

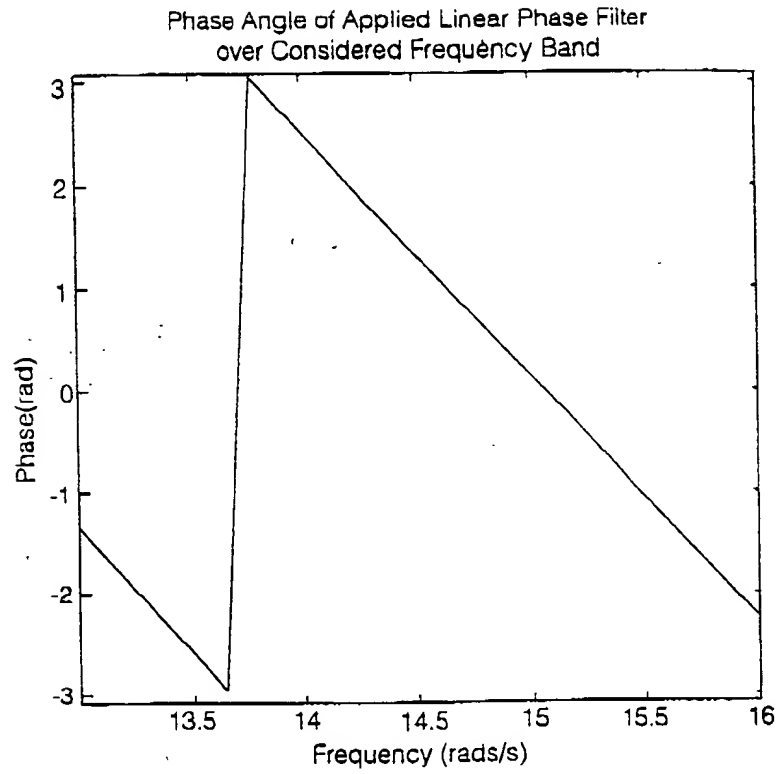


Fig. 35

09/623281

PCT/GB99/00550

WO 99/45644

30/38

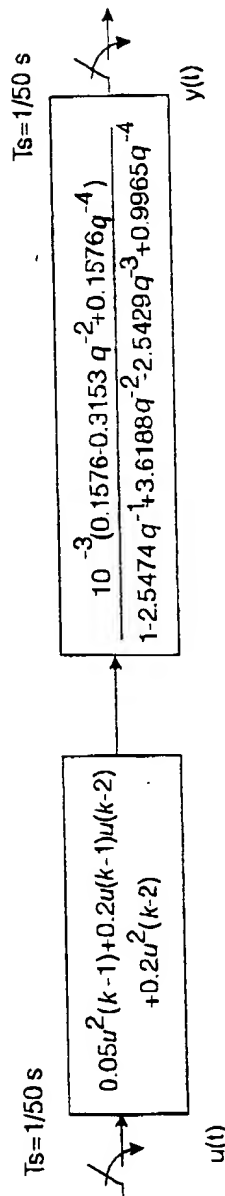


Fig. 36

09/623281

WO 99/45644

PCT/GB99/00550

31/38

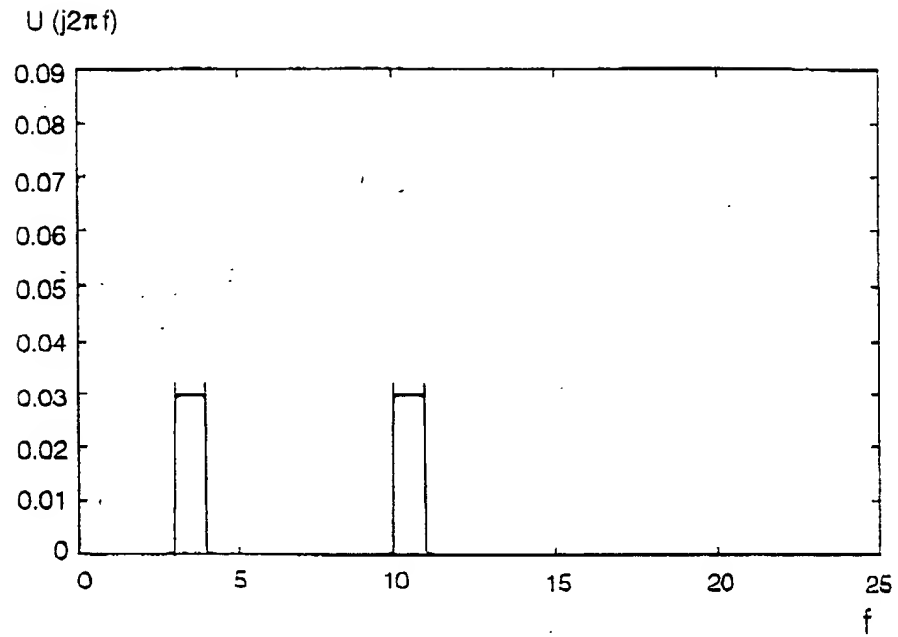


Fig. 37

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WO 99/45644

09/623281

PCT/GB99/00550

32/38

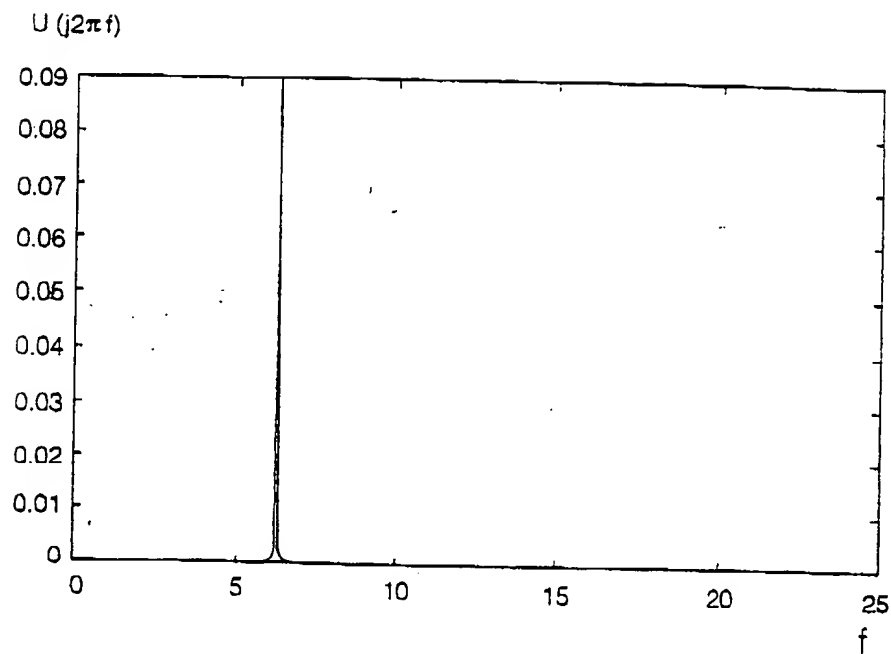


Fig. 38

SUBSTITUTE SHEET (RULE 26)



09/623281

WO 99/45644

PCT/GB99/00550

33/38

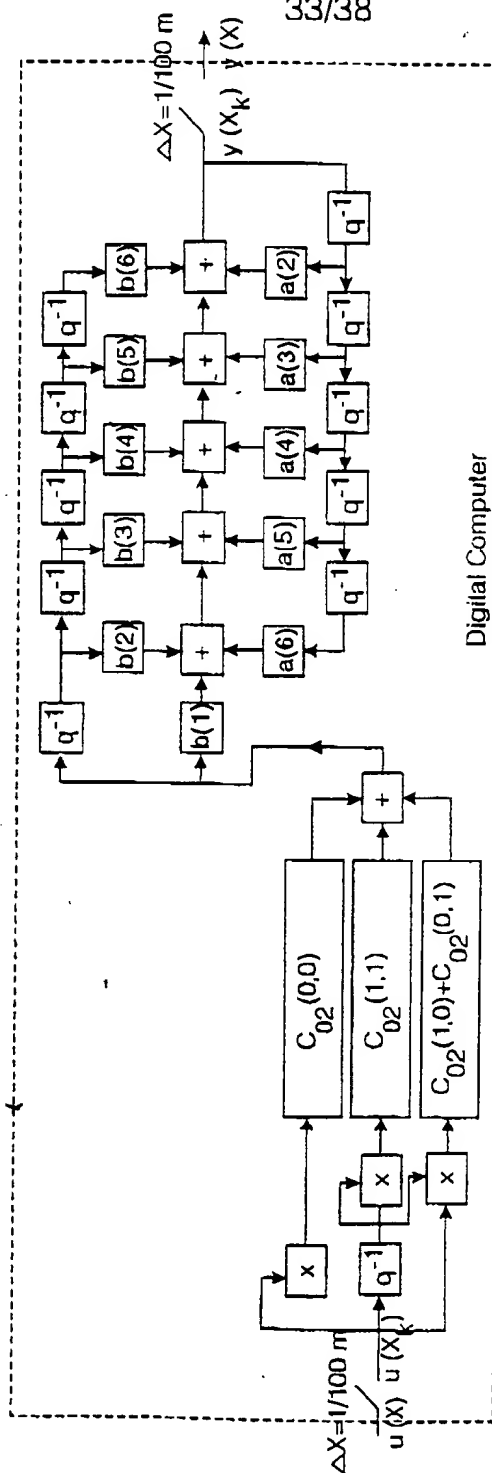


Fig. 39

09/623281

WO 99/45644

PCT/GB99/00550

34/38

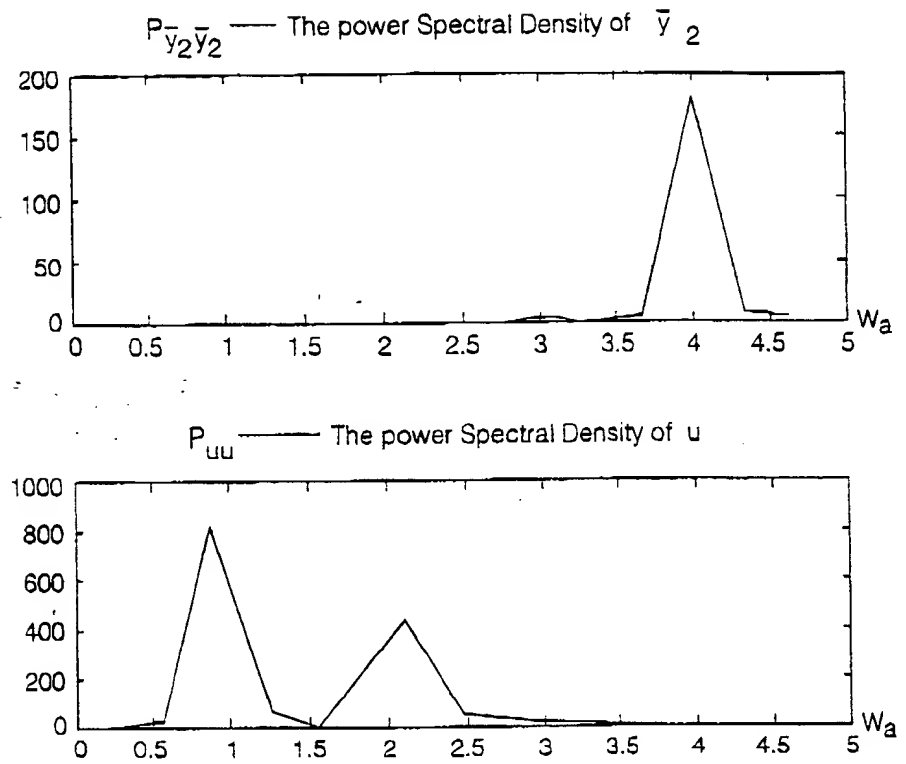


Fig. 40

09/623281

WO 99/45644

PCT/GB99/00550

35/38

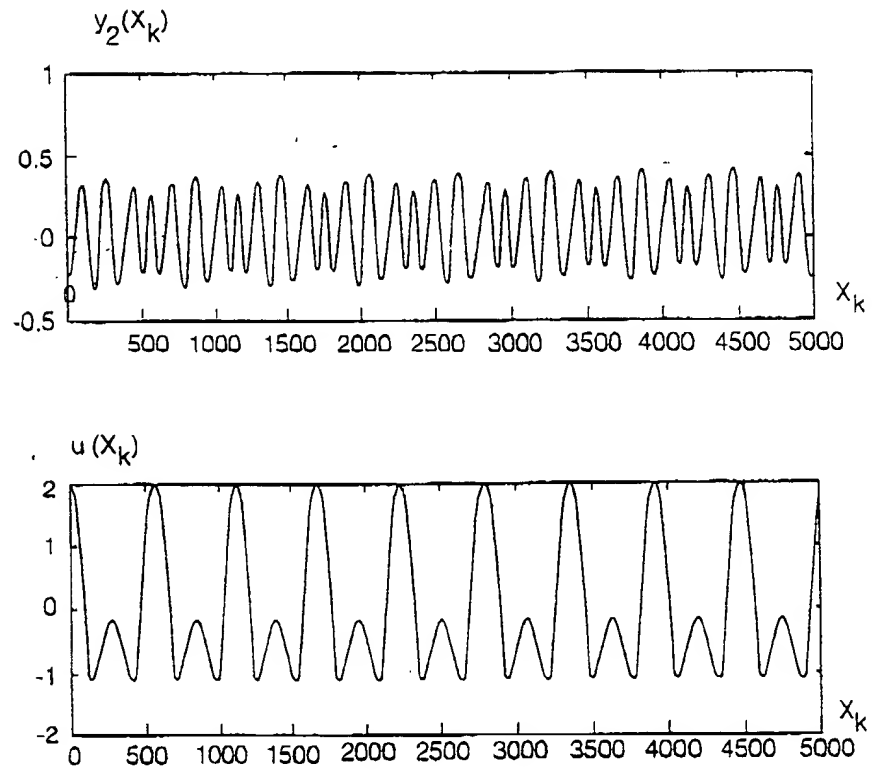


Fig. 41

WO 99/45644

09/623281

PCT/GB99/00550

36/38

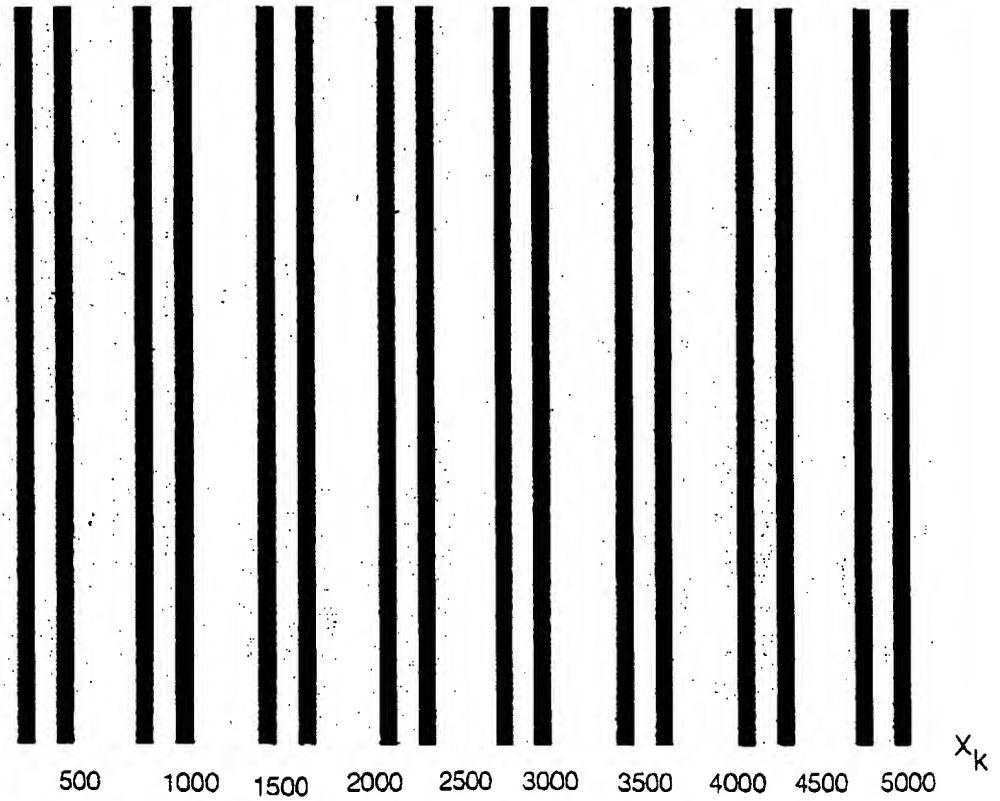


Fig. 42

SUBSTITUTE SHEET (RULE 26)

09/623281

WO 99/45644

PCT/GB99/00550

37/38

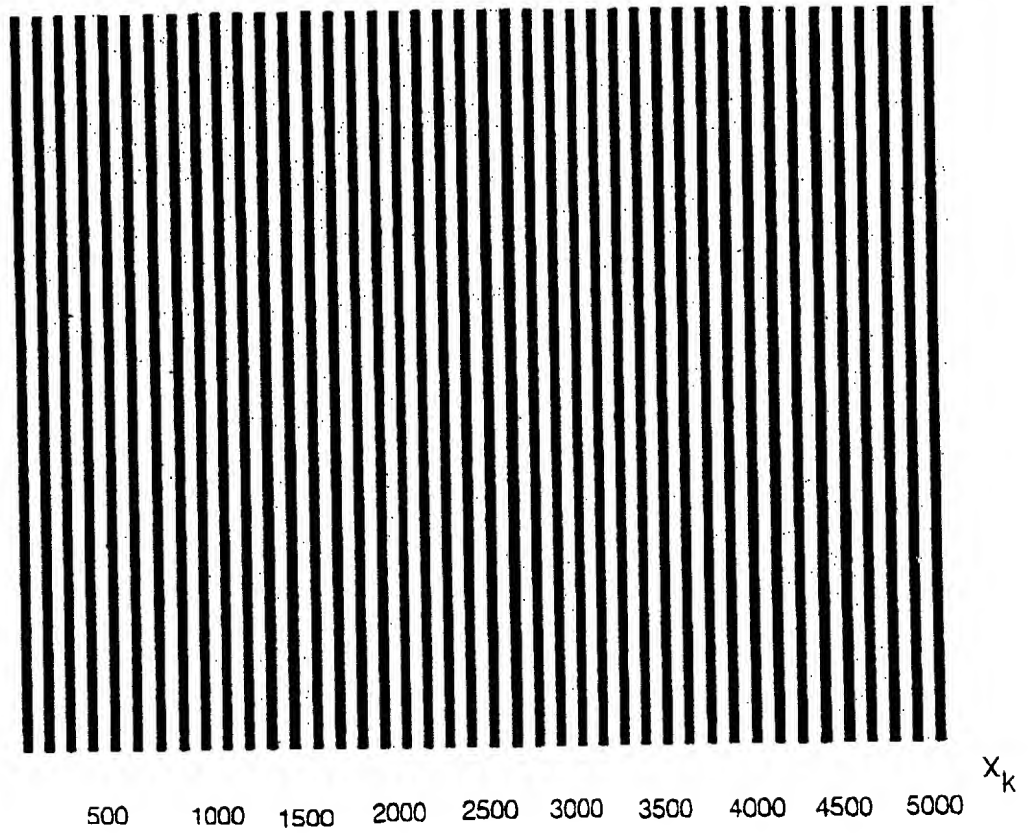


Fig. 43

**PCT/GB99/00550**

38/38

